

SEQUENCE LISTING

<110> Cell Signaling Technology, Inc.
COMB, Michael J.
ZHANG, Hui
TAN, Yi

<120> PRODUCTION OF MOTIF-SPECIFIC AND CONTEXT-INDEPENDENT ANTIBODIES USING PEPTIDE LIBRARIES AS ANTIGENS

<130> CST-138 CIP2

<150> US 09/148,712

<151> 1998-09-04

<150> US 09/535,364

<151> 2000-03-24

<160> 145

<170> PatentIn version 3.1

<210> 1

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (9)..(9)

<223> PHOSPHORYLATION; threonine at position 9 is phosphorylated

<400> 1

Ile Lys Asp Gly Ala Thr Met Lys Thr Phe Cys Gly Thr Pro
1 5 10

<210> 2

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 2

Asp Ala Ala Val Thr Pro Lys Lys Arg His Leu Ser Lys Cys
1 5 10

<210> 3

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (8)..(8)
<223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<400> 3

Asp Thr Gln Ile Lys Arg Asn Thr Phe Val Gly Thr Pro Phe Cys
1 5 10 15

<210> 4
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (5)..(5)
<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 4

His Gln Val Val Thr Arg Trp Tyr Arg Cys
1 5 10

<210> 5
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (7)..(7)
<223> PHOSPHORYLATION; threonine at position 7 is phosphorylated

<400> 5

His Gln Val Leu Met Lys Thr Val Cys Gly
1 5 10

<210> 6
<211> 14
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (7)..(7)
<223> PHOSPHORYLATION; threonine at position 7 is phosphorylated

<400> 6

Ile Pro Ile Arg Val Tyr Thr His Glu Val Val Thr Leu Cys
1 5 10

<210> 7
<211> 15

<212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<400> 7

Gly Val Pro Val Arg Thr Tyr Thr His Glu Val Val Thr Leu Cys
 1 5 10 15

<210> 8
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<400> 8

Asn Gln Val Phe Leu Gly Phe Thr Tyr Val Ala Pro Lys Lys Cys
 1 5 10 15

<210> 9
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (12)..(12)
 <223> PHOSPHORYLATION; threonine at position 12 is phosphorylated

<400> 9

Lys Glu His Met Met Asp Gly Val Thr Thr Arg Thr Phe Cys
 1 5 10

<210> 10
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (7)..(7)
 <223> PHOSPHORYLATION; threonine at position 7 is phosphorylated

<220>
 <221> MOD_RES
 <222> (9)..(9)

<223> PHOSPHORYLATION; tyrosine at position 9 is phosphorylated

<400> 10

Asp His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Cys
1 5 10 15

<210> 11

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<220>

<221> MOD_RES

<222> (9)..(9)

<223> PHOSPHORYLATION; serine at position 9 is phosphorylated

<400> 11

Glu Leu Leu Pro Thr Pro Pro Leu Ser Pro Ser Arg Arg Ser Cys
1 5 10 15

<210> 12

<211> 17

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (10)..(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>

<221> MOD_RES

<222> (12)..(12)

<223> PHOSPHORYLATION; tyrosine at position 12 is phosphorylated

<400> 12

Leu Ala Arg His Thr Asp Asp Glu Met Thr Gly Tyr Val Ala Thr Arg
1 5 10 15

Cys

<210> 13

<211> 15

<212> PRT

<213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<220>
 <221> MOD_RES
 <222> (7)..(7)
 <223> PHOSPHORYLATION; tyrosine at position 7 is phosphorylated

<400> 13

Ser Phe Met Met Thr Pro Tyr Val Val Thr Arg Tyr Tyr Arg Cys
 1 5 10 15

<210> 14
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>
 <221> MISC_FEATURE
 <222> (11)..(11)
 <223> Xaa at position 11 is arginine or lysine

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-5, 7, 10, and 12-14 = any one of the 20 amino acids except cysteine

<400> 14

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa
 1 5 10

<210> 15
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)

<223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 15

Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa
1 5 10

<210> 16

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (1)..(14)

<223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 16

Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa
1 5 10

<210> 17

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (8)..(8)

<223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>

<221> MISC FEATURE

<222> (1)..(14)

<223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 17

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa
1 5 10

<210> 18

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (8)..(8)

<223> Xaa at position 8 is serine or threonine

<220>
 <221> MISC FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 18

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa
 1 5 10

<210> 19
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC FEATURE
 <222> (5)..(5)
 <223> Xaa at position 5 is aspartic acid or glutamic acid

<220>
 <221> MISC FEATURE
 <222> (8)..(8)
 <223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>
 <221> MISC FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-4, 6-7, and 9-13 = any one of the 20 amino acids except cysteine

<400> 19

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
 1 5 10

<210> 20
 <211> 13
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC FEATURE
 <222> (7)..(7)
 <223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>
 <221> MISC FEATURE
 <222> (8)..(10)
 <223> Xaa at positions 8-10 is aspartic acid or glutamic acid

<220>
 <221> MISC FEATURE
 <222> (1)..(13)

<223> Xaa at positions 1-6, and 11-13 = any one of the 20 amino acids except cysteine

<400> 20

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10

<210> 21

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (9)..(9)

<223> Xaa at position 9 is phosphoserine or phosphothreonine

<220>

<221> MISC FEATURE

<222> (10)..(10)

<223> Xaa at position 10 is phenylalanine or tyrosine

<220>

<221> MISC FEATURE

<222> (1)..(14)

<223> Xaa at positions 1-4, 6-7, and 11-14 = any one of the 20 amino acids except cysteine

<400> 21

Xaa Xaa Xaa Xaa Phe Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Cys
1 5 10 15

<210> 22

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (5)..(5)

<223> Xaa at position 5 is arginine or lysine

<220>

<221> MISC FEATURE

<222> (7)..(7)

<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>

<221> MISC FEATURE

<222> (1)..(13)

<223> Xaa at positions 1-4, 6, and 8-13 = any one of the 20 amino acids except cysteine

<400> 22

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
1 5 10

<210> 23

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (7)..(7)

<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>

<221> MISC FEATURE

<222> (4)..(4)

<223> Xaa at position 4 is arginine or lysine

<220>

<221> MISC FEATURE

<222> (1)..(13)

<223> Xaa at positions 1-3, 5-6, and 8-13 = any one of the 20 amino acids except cysteine

<400> 23

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
1 5 10

<210> 24

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (7)..(7)

<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>

<221> MISC FEATURE

<222> (8)..(8)

<223> Xaa at position 8 is phenylalanine or isoleucine or methionine

<220>

<221> MISC FEATURE

<222> (1)..(13)

<223> Xaa at positions 1-6, and 9-13 = any one of the 20 amino acids except cysteine

<400> 24

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
 1 5 10

<210> 25
 <211> 14
 <212> PRT
 <213> Homo sapiens
 <220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> Xaa at position 8 is phenylalanine or isoleucine

<220>
 <221> MISC_FEATURE
 <222> (1)..(13)
 <223> Xaa at positions 1-6, and 9-13 = any one of the 20 amino acids except cysteine

<400> 25

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
 1 5 10

<210> 26
 <211> 15
 <212> PRT
 <213> Homo sapiens
 <220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-6, and 9-14= any one of the 20 amino acids except cysteine

<400> 26

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Cys
 1 5 10 15

<210> 27
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC FEATURE
 <222> (8)..(8)
 <223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>
 <221> MISC FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 27

Xaa	Xaa	Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Pro	Xaa	Xaa	Xaa	Xaa	Cys
1				5				10					15

<210> 28
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC FEATURE
 <222> (7)..(7)
 <223> Xaa at position 7 is serine or threonine

<220>
 <221> MISC FEATURE
 <222> (1)..(13)
 <223> Xaa at positions 1-6, and 8-13 = any one of the 20 amino acids except cysteine

<400> 28

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys
1				5				10					

<210> 29
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC FEATURE
 <222> (8)..(8)
 <223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>
 <221> MISC FEATURE
 <222> (11)..(11)
 <223> Xaa at position 11 is arginine or lysine

<220>
 <221> MISC FEATURE
 <222> (1)..(14)

<223> Xaa at positions 1-5, 7, 10, and 12-14 = any one of the 20 amino acids except cysteine

<400> 29

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Cys
1 5 10 15

<210> 30

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (6)..(6)

<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 30

Val Ile Pro Pro His Thr Pro Val Arg Thr Val Met Asn Thr Cys
1 5 10 15

<210> 31

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 31

Ser Val Ala Lys Thr Met Asp Ala Gly Cys
1 5 10

<210> 32

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (10)..(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<400> 32

Arg Ile Tyr Ser Tyr Gln Met Ala Leu Thr Pro Val Val Val Lys Cys
1 5 10 15

<210> 33

<211> 15

<212> PRT
 <213> Homo sapiens
 <220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 33

Xaa	Xaa	Xaa	Xaa	Arg	Ser	Xaa	Ser	Xaa	Pro	Xaa	Xaa	Xaa	Xaa	Cys
1				5					10					15

<210> 34
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 34

Xaa	Xaa	Xaa	Xaa	Arg	Ser	Xaa	Ser	Xaa	Pro	Xaa	Xaa	Xaa	Xaa	Cys
1				5					10					15

<210> 35
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (7)..(7)
 <223> PHOSPHORYLATION; serine at position 7 is phosphorylated

<400> 35

Gly	Leu	Tyr	Arg	Ser	Pro	Ser	Met	Pro	Glu	Asn	Leu	Asn	Arg	Cys
1				5					10					15

<210> 36
 <211> 15
 <212> PRT
 <213> Homo sapiens

<400> 36

Gly Leu Tyr Arg Ser Pro Ser Met Pro Glu Asn Leu Asn Arg Cys
1 5 10 15

<210> 37
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (7)-(7)
<223> PHOSPHORYLATION; serine at position 7 is phosphorylated

<400> 37

Thr Arg Ser Arg His Ser Ser Tyr Pro Ala Gly Thr Glu Glu Cys
1 5 10 15

<210> 38
<211> 15
<212> PRT
<213> Homo sapiens

<400> 38

Thr Arg Ser Arg His Ser Ser Tyr Pro Ala Gly Thr Glu Glu Cys
1 5 10 15

<210> 39
<211> 15
<212> PRT
<213> Homo sapiens

<400> 39

Phe Arg Gly Arg Ser Arg Ser Ala Pro Pro Asn Leu Trp Ala Cys
1 5 10 15

<210> 40
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (7)-(7)
<223> PHOSPHORYLATION; serine at position 7 is phosphorylated

<400> 40

Phe Arg Gly Arg Ser Arg Ser Ala Pro Pro Asn Leu Trp Ala Cys
1 5 10 15

<210> 41
<211> 15

<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa at position 8 is serine or threonine

<220>
<221> MISC_FEATURE
<222> (1)..(14)
<223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 41

Xaa	Xaa	Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Pro	Xaa	Xaa	Xaa	Xaa	Xaa	Cys
1				5					10					15

<210> 42
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa at position 11 is arginine or lysine

<220>
<221> MISC_FEATURE
<222> (1)..(14)
<223> Xaa at positions 1-5, 7, 10, and 12-14 = any one of the 20 amino acids except cysteine

<400> 42

Xaa	Xaa	Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Pro	Xaa	Xaa	Xaa	Xaa	Xaa	Cys
1				5					10					15

<210> 43
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (8)..(8)
<223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<400> 43

Ser Pro Tyr Lys Phe Pro Ser Ser Pro Leu Arg Ile Pro Gly Cys
1 5 10 15

<210> 44

<211> 15

<212> PRT

<213> Homo sapiens

<400> 44

Val Ile Pro Pro His Thr Pro Val Arg Thr Val Met Asn Thr Cys
1 5 10 15

<210> 45

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD RES

<222> (10)..(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(14)

<223> Xaa at positions 2-4, 6, 8-9, 11-14 = any one of the 20 amino acids except cysteine

<400> 45

Cys Xaa Xaa Xaa Arg Xaa Arg Xaa Xaa Thr Xaa Xaa Xaa Xaa
1 5 10

<210> 46

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD RES

<222> (10)..(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(14)

<223> Xaa at positions 2-6, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 46

Cys Xaa Xaa Xaa Xaa Xaa Arg Arg Xaa Thr Xaa Xaa Xaa Xaa
1 5 10

<210> 47
 <211> 15
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MISC_FEATURE
 <222> (9)..(9)
 <223> Xaa at position 9 is phosphoserine or phosphothreonine

<220>
 <221> MISC_FEATURE
 <222> (10)..(10)
 <223> Xaa at position 10 is phenylalanine or tyrosine

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-4, 6-7, and 11-14 = any one of the 20 amino acids except cysteine

<400> 47

 Xaa Xaa Xaa Xaa Phe Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Cys
 1 5 10 15

<210> 48
 <211> 8
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (6)..(6)
 <223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 48

 Arg Gln Arg Ser Thr Ser Thr Pro
 1 5

<210> 49
 <211> 8
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (6)..(6)
 <223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 49

 Lys Gly Arg Thr Trp Thr Leu Cys

1 5

<210> 50
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 50

Arg Pro Arg Thr Thr Ser Phe Ala
1 5

<210> 51
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 51

Arg Arg Arg Thr Ser Ser Phe Ala
1 5

<210> 52
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 52

Arg Arg Arg Ala Ala Ser Met Asp
1 5

<210> 53
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 53

Arg Ile Arg Thr Gln Ser Phe Ser
1 5

<210> 54
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 54

Arg Glu Arg Lys Arg Thr Val Trp
1 5

<210> 55
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 55

Lys Asp Arg Gln Gly Thr His Lys
1 5

<210> 56
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 56

Arg Asp Arg Asn Gly Thr His Leu
1 5

<210> 57
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 57

Lys Leu Arg Leu Ser Thr Asp Tyr
1 5

<210> 58
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 58

Arg Asp Lys Ser Val Thr Asp Ser
1 5

<210> 59
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 59

Arg Leu Arg Lys Ser Ser Ser Tyr
1 5

<210> 60
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 60

Arg Pro Arg Ser Cys Thr Trp Pro
1 5

<210> 61
 <211> 8
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (6)..(6)
 <223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 61

Arg Arg Arg Ala Ala Ser Met Asp
 1 5

<210> 62
 <211> 5
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 62

Arg Phe Phe Thr Arg
 1 5

<210> 63
 <211> 5
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 63

Arg Thr Tyr Thr Leu
 1 5

<210> 64
 <211> 5
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 64

Lys Arg Ser Thr Met
1 5

<210> 65

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD RES

<222> (4)..(4)

<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 65

Arg Arg Arg Ser Ser
1 5

<210> 66

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD RES

<222> (4)..(4)

<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 66

Arg Arg Pro Ser Tyr
1 5

<210> 67

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD RES

<222> (4)..(4)

<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 67

Arg Thr Tyr Thr His
1 5

<210> 68

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 68

Arg Ser Pro Ser Met
1 5

<210> 69
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 69

Arg Lys Arg Thr Val
1 5

<210> 70
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 70

Arg Gln Gly Thr His
1 5

<210> 71
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 71

Arg Ser Leu Thr Glu
1 5

<210> 72

<211> 5
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 72
 Arg Gln Glu Thr Val
 1 5

<210> 73
 <211> 5
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 73
 Arg Ala Tyr Thr His
 1 5

<210> 74
 <211> 5
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 74
 Lys Arg Asp Thr Phe
 1 5

<210> 75
 <211> 5
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 75

Lys Ser Val Thr Asp
1 5

<210> 76
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 76

Arg Lys Ser Ser Ser
1 5

<210> 77
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 77

Arg Ser Cys Thr Tyr
1 5

<210> 78
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 78

Phe Phe Thr Arg His
1 5

<210> 79
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)

<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 79

Thr Trp Thr Leu Cys
1 5

<210> 80

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 80

Gln Arg Ser Phe Val
1 5

<210> 81

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 81

Ala Tyr Ser Phe Cys
1 5

<210> 82

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 82

Gly Tyr Ser Phe Val
1 5

<210> 83

<211> 5

<212> PRT

<213> Homo sapiens
<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 83

Thr Thr Ser Phe Ala
1 5

<210> 84
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 84

Thr Ser Ser Phe Ala
1 5

<210> 85
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 85

Val Tyr Thr His Glu
1 5

<210> 86
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 86

Thr Tyr Thr His Glu
1 5

<210> 87
 <211> 5
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (3)..(3)
 <223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 87

Ala Tyr Thr His Gln
1 5

<210> 88
 <211> 15
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (10)..(10)
 <223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (2)..(15)
 <223> At positions 2-4, 6, 9, and 13-15, X = any amino acid except C and W; At position 8, X = any amino acid except C and W and is biased 50% to T; At position 11, X = any amino acid except C and W and is biased 50% to F; At position 12, X = any amino acid except C and W and is biased 50% to G.

<400> 88

Cys Xaa Xaa Xaa Arg Xaa Arg Xaa Xaa Thr Xaa Xaa Xaa Xaa Xaa
1 5 10 15

<210> 89
 <211> 13
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (7)..(7)
 <223> PHOSPHORYLATION; serine at position 7 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (2)..(13)
 <223> At positions 2-4, 11-13, X = any amino acid except C, W or Y; At positions 5-6 and 9-10, X = K or R; At position 8, X = F, L, or V.

<400> 89

Cys Xaa Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Xaa
1 5 10

<210> 90

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<220>

<221> MISC_FEATURE

<222> (2)..(6)

<223> At positions 2, 4, and 6, X = any amino acid; At position 3, X =
Y or F

<400> 90

Arg Xaa Xaa Xaa Ser Xaa Pro
1 5

<210> 91

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (8)..(8)

<223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>

<221> MISC_FEATURE

<222> (1)..(13)

<223> At postions 1-3, 5, 7, 9, and 11-13, X = any amino acid except c
ysteine; At position 6, X = F or Y.

<400> 91

Xaa Xaa Xaa Arg Xaa Xaa Xaa Ser Xaa Pro Xaa Xaa Xaa Cys
1 5 10

<210> 92

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (9)..(9)
 <223> PHOSPHORYLATION; threonine at position 9 is phosphorylated

<220>
 <221> MISC FEATURE
 <222> (2)..(16)
 <223> At positions 2-7 and 12-16, X = any amino acid except C; At position 11, X = D or E

<400> 92

Cys Xaa Xaa Xaa Xaa Xaa Xaa Leu Thr Gln Xaa Xaa Xaa Xaa Xaa Xaa
 1 5 10 15

<210> 93
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (9)..(9)
 <223> PHOSPHORYLATION; serine at position 9 is phosphorylated

<220>
 <221> MISC FEATURE
 <222> (2)..(16)
 <223> At positions 2-7 and 12-16, X = any amino acid except C; At position 11, X = D or E

<400> 93

Cys Xaa Xaa Xaa Xaa Xaa Xaa Leu Ser Gln Xaa Xaa Xaa Xaa Xaa Xaa
 1 5 10 15

<210> 94
 <211> 13
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>
 <221> MISC FEATURE
 <222> (2)..(13)
 <223> At positions 2-4, 7, 9, and 11-13, X= any amino acid except C

<400> 94

Cys Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa
 1 5 10

<210> 95
 <211> 8
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (6)..(6)
 <223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<220>
 <221> MISC FEATURE
 <222> (2)..(8)
 <223> At positions 2 and 4-5, X = any amino acid

<400> 95

Phe Xaa Arg Xaa Xaa Thr Phe Phe
 1 5

<210> 96
 <211> 17
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (10)..(10)
 <223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>
 <221> MISC FEATURE
 <222> (2)..(8)
 <223> At postions 2 and 16-17, X = any amino acid except C and W; At positions 3-4, X = any amino acid except C and W and is biased 50% to R; At position 6, X = any amino acid except C and W and is biased 50% to K; At position 8, X = any amino acid except C and W and is biased 50% to Q

<220>
 <221> MISC FEATURE
 <222> (9)..(17)
 <223> At postion 9, X = any amino acid except C and W and is biased 50% to G; At position 13, X = any amino acid except C and W and is biased 50% to Y; At positions 14-15, X = any amino acid except C and W and is biased 50% to F

<400> 96

Cys Xaa Xaa Xaa Phe Xaa Arg Xaa Xaa Thr Phe Phe Xaa Xaa Xaa Xaa
 1 5 10 15

Xaa

<210> 97
 <211> 6
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (3)..(3)
 <223> PHOSPHORYLATION; tyrosine at position 3 is phosphorylated

<220>
 <221> MISC FEATURE
 <222> (5)..(5)
 <223> At position 5, X = any amino acid

<400> 97

Val Ile Tyr Ala Xaa Pro
1 5

<210> 98
 <211> 15
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; tyrosine at position 8 is phosphorylated

<220>
 <221> MISC FEATURE
 <222> (2)..(15)
 <223> At postions 2-3, 5, and 13-15, X = any amino acid except C and W
 ; At positions 4 and 10, X = any amino acid except C and W and
 is biased 50% to A; At position 12, X = any amino acid except C a
 nd W and is biased 50% to F

<400> 98

Cys Xaa Xaa Xaa Xaa Val Ile Tyr Ala Xaa Pro Xaa Xaa Xaa Xaa
1 5 10 15

<210> 99
 <211> 9
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<220>
 <221> MISC_FEATURE

<222> (2)..(7)
 <223> At positions 2-4 and 7, X = any amino acid

<400> 99

Lys Xaa Xaa Xaa Thr Pro Xaa His Arg
 1 5

<210> 100
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (2)..(14)
 <223> At positions 2-3 and 13-14, X = any amino acid except C and W; At positions 5-6, X = any amino acid except C and W and is biased 50% to H; At positions 7 and 10, X = any amino acid except C and W and is biased 50% to K

<400> 100

Cys Xaa Xaa Lys Xaa Xaa Xaa Thr Pro Xaa His Arg Xaa Xaa
 1 5 10

<210> 101
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; tyrosine at position 8 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (2)..(14)
 <223> At positions 2-4 and 13-14, X = any amino acid except C and W; At positions 5-7, X = any amino acid except C and W and is biased 50% to E and D; At position 10, X = any amino acid except C and W and is biased 50% to M; At position 12, X = any amino acid except C and W and is biased 50% to F

<400> 101

Cys Xaa Xaa Xaa Xaa Xaa Xaa Tyr Met Xaa Met Xaa Xaa Xaa
 1 5 10

<210> 102
 <211> 4
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (1)..(2)
 <223> PHOSPHORYLATION; tyrosine at position 1 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (3)..(3)
 <223> At position 3, X = any amino acid

<400> 102

Tyr Met Xaa Met
1

<210> 103
 <211> 15
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (9)..(9)
 <223> PHOSPHORYLATION; tyrosine at position 9 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (2)..(15)
 <223> At positions 2-7, 11, and 13-15, X = any amino acid except C and W; At position 8, X = any amino acid except C and W and is biased 50% to E

<400> 103

Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Met Xaa Met Xaa Xaa Xaa
1 5 10 15

<210> 104
 <211> 6
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (3)..(3)
 <223> At position 3, X = any amino acid

<400> 104

Arg Gln Xaa Thr Phe Asp
1 5

<210> 105

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (8)..(8)

<223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<220>

<221> MISC_FEATURE

<222> (2)..(15)

<223> At positions 2-3 and 13-15, X = any amino acid except C and W; At position 4, X = any amino acid except C and W and is biased 50% to K; At position 7, X = any amino acid except C and W and is biased 50% to Q; At position 11, X = any amino acid except C and W and is biased 50% to L

<220>

<221> MISC_FEATURE

<222> (12)..(12)

<223> At position 12, X = any amino acid except C and W and is biased 50% to F

<400> 105

Cys Xaa Xaa Xaa Arg Gln Xaa Thr Phe Asp Xaa Xaa Xaa Xaa Xaa
1 5 10 15

<210> 106

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (4)..(4)

<223> PHOSPHORYLATION; tyrosine at position 4 is phosphorylated

<220>

<221> MISC_FEATURE

<222> (2)..(2)

<223> At position 2, X = any amino acid

<400> 106

Glu Xaa Ile Tyr Gly Glu Phe
1 5

<210> 107
 <211> 16
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (9)..(9)
 <223> PHOSPHORYLATION; tyrosine at position 9 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (2)..(16)
 <223> At postions 2-4 and 13-16, X = any amino acid except C and W; A
 t positions 5 and 7, X = any amino acid except C and W and is bi
 ased 50% to E

<400> 107

Cys Xaa Xaa Xaa Xaa Glu Xaa Ile Tyr Gly Glu Phe Xaa Xaa Xaa Xaa
 1 5 10 15

<210> 108
 <211> 4
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> PHOSPHORYLATION; serine at position 1 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (4)..(4)
 <223> At position 4, X = K or R

<400> 108

Ser Pro Arg Xaa
 1

<210> 109
 <211> 16
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (9)..(9)
 <223> PHOSPHORYLATION; serine at position 9 is phosphorylated

<220>
 <221> MISC_FEATURE

<222> (2)..(16)
 <223> At postions 2-4 and 14-16, X = any amino acid except C and W; At positions 5-7, X = any amino acid except C and W and is biased 50% to H; At position 8, X = any amino acid except C and W and is biased 50% to K and R; At position 13, X = any amino acid except C and W and is biased 50% to R

<400> 109

Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Pro Arg Xaa Xaa Xaa Xaa Xaa
 1 5 10 15

<210> 110
 <211> 6
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> PHOSPHORYLATION; threonine at position 1 is phosphorylated

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<220>
 <221> MISC FEATURE
 <222> (3)..(4)
 <223> At positions 3-4, X = any amino acid

<400> 110
 Thr Pro Xaa Xaa Ser Pro
 1 5

<210> 111
 <211> 18
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<220>
 <221> MOD_RES
 <222> (12)..(12)
 <223> PHOSPHORYLATION; serine at position 12 is phosphorylated

<220>
 <221> MISC FEATURE
 <222> (2)..(18)

<223> At postions 2, 4, and 14-18, X = any amino acid except C and W;
 At position 3, X = any amino acid except C and W and is biased
 50% to P and F; At positions 5-6 and 11, X = any amino acid exce
 pt C and W and is biased 50% to P and L; At positions 7 and 10,
 X = any amino acid except C and W and is biased 50% to P

<400> 111

Cys Xaa Xaa Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Ser Pro Xaa Xaa Xaa
 1 5 10 15

Xaa Xaa

<210> 112
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>
 <221> MISC FEATURE
 <222> (2)..(15)
 <223> At positions 2-6 and 10-15, X = any amino acid except C and W

<400> 112

Cys Xaa Xaa Xaa Xaa Xaa Pro Ser Pro Xaa Xaa Xaa Xaa Xaa Xaa
 1 5 10 15

<210> 113
 <211> 8
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 113

Lys Arg Arg Arg Ser Ser Lys Asp
 1 5

<210> 114
 <211> 8
 <212> PRT
 <213> Homo sapiens

<220>

<221> MOD_RES
<222> (5)..(5)
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 114

Lys Arg Lys Arg Ser Arg Lys Glu
1 5

<210> 115
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (5)..(5)
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 115

Ser Arg Arg Pro Ser Tyr Arg Lys
1 5

<210> 116
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (5)..(5)
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 116

Gly Trp Lys Asn Ser Ile Arg His
1 5

<210> 117
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 117

Gly Leu Thr Val Lys
1 5

<210> 118

<211> 5
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (3)..(3)
 <223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 118

Leu Ala Thr Val Lys
 1 5

<210> 119
 <211> 5
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (3)..(3)
 <223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 119

Phe Phe Thr Arg His
 1 5

<210> 120
 <211> 5
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (3)..(3)
 <223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 120

Pro Leu Thr Pro Arg
 1 5

<210> 121
 <211> 5
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (3)..(3)
 <223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 121

Asn Val Thr Met Arg
1 5

<210> 122
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 122

Ala Val Thr Pro Lys
1 5

<210> 123
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 123

Pro Leu Ser Gln Glu
1 5

<210> 124
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 124

Tyr Pro Ser Gln Glu
1 5

<210> 125
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)

<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 125

Val Ser Thr Gln Glu
1 5

<210> 126

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<220>

<221> MOD_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 126

Ser Val Thr Gln Ser Gln Gly
1 5

<210> 127

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 127

Pro Ile Ser Gln Asn
1 5

<210> 128

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 128

Ser Phe Ser Gln Pro

1 5

<210> 129
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 129

Ser Ser Ser Gln Pro
1 5

<210> 130
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 130

Asp Leu Ser Gln Val
1 5

<210> 131
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 131

Ser Leu Ser Gln Gly
1 5

<210> 132
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (5)..(5)
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 132

Tyr Arg Ser Pro Ser Met Pro
1 5

<210> 133

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 133

Gly Arg Ser Arg Ser Ala Pro
1 5

<210> 134

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 134

Pro Arg Thr Thr Ser Phe Ala
1 5

<210> 135

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 135

Ser Arg His Ser Thr Tyr Pro
1 5

<210> 136

<211> 7

<212> PRT

<213> Homo sapiens

<220>
<221> MOD_RES
<222> (5)..(5)
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 136

Gln Arg Ser Thr Ser Thr Pro
1 5

<210> 137
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (5)..(5)
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 137

Leu Arg Ser Ile Ser Leu Pro
1 5

<210> 138
<211> 6
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (5)..(5)
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 138

Phe Leu Gly Phe Ser Tyr
1 5

<210> 139
<211> 6
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (5)..(5)
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 139

Phe Ser Asn Phe Ser Phe
1 5

<210> 140
 <211> 6
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 140

 Phe Arg Asn Phe Ser Tyr
 1 5

<210> 141
 <211> 6
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 141

 Phe Gln Gly Phe Thr Tyr
 1 5

<210> 142
 <211> 6
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 142

 Phe Ala Gly Phe Ser Tyr
 1 5

<210> 143
 <211> 6
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 143

Phe Leu Gly Phe Thr Tyr
1 5

<210> 144

<211> 6

<212> PRT

<213> Homo sapiens

<220>

<221> MOD RES

<222> (5)..(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 144

Phe Ser His Phe Thr Phe
1 5

<210> 145

<211> 6

<212> PRT

<213> Homo sapiens

<220>

<221> MOD RES

<222> (5)..(5)

<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 145

Phe Pro Gln Phe Ser Tyr
1 5